CLAIMS

What is claimed is:

1.   A trusted collaboration data transmission process and protocol, comprising:

5   establishing one or a plurality of trusted participants a participant who desires to

initiate and send or receive a trusted communication;

establishing one or a plurality of trusted representatives to act on behalf of the

trusted participants;

performing a trusted registration procedure to create registry information and to

10   establish a trusted relationships between trusted participants and trusted representatives;

performing a trusted registration procedure to establish a trusted relationship

among trusted representatives;

creating an identification card correlating to each of the trusted participants and

each of the trusted representatives, during the trusted registration process;

15   factually identifying a trusted participant as a sending participant through the

sender identification card sent to a sender trusted representative, which is the trusted

representative of the sending participant;

factually identifying a trusted participant as a receiving participant through the

registry information of the receiving participant or the receiver trusted representative,

20   which is the trusted representative of the receiving participant;

presenting the sender identification card to the sender trusted representative prior

to or during a data transmission;

authenticating the sending participant by examining and confirming the sender

identification card;

replacing the sender identification card with a sender trusted representative identification card, if authenticated;

applying rules and policies to determine how to process transmission request coming from a non-trusted or unauthenticated participant;

5   blocking the transmission or processing the transmission without presenting the sender trusted representative identification card if sending participant is not authenticated;

authenticating the receiving participant, if not authenticated, by either blocking the transmission or processing the transmission without presenting the sender trusted representative identification card, pursuant to certain rules and policies;

10   processing the data transmission with or without a sender trusted representative identification card;

if a receiving participant of a data transmission is not an trusted participant, delivering the data to the recipient in its original format;

if a receiving participant is a trusted participant and is under the same trusted

15 representative as the sending participant, presenting the sender trusted representative identification card to the receiving participant;

if the receiving participant is a trusted participant and is under a different trusted representative, presenting the sender trusted representative identification card to the receiver trusted representative;

20   upon receipt, replacing the sender trusted representative identification card with the receiver trusted representative identification card;

acknowledging a data transmission by the receiving participant or receiver trusted representative end of a communication link by the receiving participant or receiver trusted representative;

processing the data transmission;

confirming the presence of the receiver trusted representative digital certificate in the transmitted data; and

confirmation comprising evidence that the data transmission is coming from a trusted entity.

2.   The trusted collaboration data transmission process and protocol of Claim 1, further comprising a multi-way communication during which the sending participant(s) and the receiving participant(s) switch roles during the communication depending upon whether the participant is initiating a data transmission or receiving a data transmission.

3.   The trusted collaboration data transmission process and protocol of Claim 2, further comprising being implemented using computer hardware and software.

4.   The trusted collaboration data transmission process and protocol of Claim 3, wherein:

the sending participant is a software application or an end-user client;

the receiving participant is a software application or an end-user client;

the sending trusted representative is a software component consisting of a set of rules and policy constructs;

the processing logics of the enterprise controlling the sending participant; and

the receiver trusted representative is a software component consisting of a set of rules and policy constructs; and

the processing logics of the enterprise controlling the receiving participant.

5.   The trusted collaboration data transmission process and protocol of Claim 4, wherein:

actions of the receiving participant and sending participant are initiated at a client level; and

actions of the receiver trusted representative and sender trusted representative are initiated at a server level.

6.   The trusted collaboration data transmission process and protocol of Claim 5, wherein the sending participant and the receiving participant are communicating over a computer network.

7.   The trusted collaboration data transmission process and protocol of Claim 3, wherein:

the sending participant is an individual acting through a software interface;

the receiving participant is an individual acting through a software interface;

the sending trusted representative is software component consisting of a set of rules and policy constructs and the processing logics of the sending participant's enterprise; and

the receiver trusted representative is a software component consisting of a set of rules and policy constructs and the processing logics of the receiving participant's enterprise.

8.   The trusted collaboration data transmission process and protocol of Claim 7, wherein:

actions of the receiving participant and sending participant are initiated at a client level; and

actions of the receiver trusted representative and sender trusted representative are initiated at a server level.

5   9.   The trusted collaboration data transmission process and protocol of Claim 8, wherein the sending participant and the receiving participant are communicating over a computer network:

10.   The trusted collaboration data transmission process and protocol of Claim 1, wherein the trusted registration process to establish a trusted relationship between a
10   participant and a trusted representative and between a trusted representative and another trusted representative is implemented using an intelligent client services software module resident on a participant PC and a TREM resident on an enterprise server.

11.   The trusted collaboration data transmission process and protocol of Claim 10, wherein:

15   a registration server creates the registrant identification card, be it a individual participant or a remote trusted representative;

the identification card comprises a set of structured information that is presented on a request for exchange or access;

a configuration file is used for model definitions, which includes attribute
20   definitions for the sending trusted representative and receiver trusted representative to compare to the sender identification card and receiver identification card;

a data storage location for the sending trusted representative and receiver trusted representative to compare to the sender identification card and receiver identification card;

the data storage location to store the trusted registry information;

the registration server to authenticate incoming registry requests and to dictate the model;

a security server to approve participant requests; and

5   the intelligent client service allowing for dynamic data entry and trusted exchange for secured registration.

12.   The trusted collaboration data transmission process and protocol of Claim 1, wherein the trusted registration process further comprising:

creating a sender identification card correlating to the sending participant during

10   the trusted registration process using an sender intelligent client services software module; and

creating a receiver identification card correlating to the receiver participant during the trusted registration process using an receiver intelligent client services software module.

15   13.   The trusted collaboration data transmission process and protocol of Claim 12, wherein the sender identification card correlating to the sending participant is secured using a pass-phrase.

14.   A trusted collaboration data transmission process and protocol, comprising:

identifying a sending participant through personal identification data sent through

20   a trusted representative;

identifying a receiving participant through identification data sent through a trusted representative;

establishing a trusted relationship by a trusted registration process performed by the participants with their trusted representatives and/or one trusted representative with another trusted representatives with which it communicates;

creating a digital certificate in the registration process which is presented by

5   the participant who initiates a trusted communication;

presenting the personal certificate to the trusted representative during the data transmission;

replacing the participant's certificate with the trusted representative's certificate, if authenticated;

10   processing the data transmission;

acknowledging the transmission on other end of the communication link by the receiving participant or its trusted representative;

presenting the sending participant's trusted representative certificate to the receiving participant trusted representative;

15   the receiving participant trusted representative replacing the sending participant's trusted representative's certificate with its own and processing the data transmission; and

the presence of the trusted representative's certificate in the transmitted data being evidence that data is coming from a trusted entity.

15.   The trusted collaboration data transmission process and protocol of Claim

20   14, further comprising the actions of the participants being initiated at a client level; and

actions of the trusted representatives being initiated at a server level.

16. The trusted collaboration data transmission process and protocol of Claim 15, wherein the participants and trusted representatives are communicating over a computer network.

17. A method for an authentication process within a distributed data processing system, the method comprising trusted registration, identification, authentication and authorization actions of a trusted remote engine manager and a virtual security officer sub-module, resident on a computer server, and identification, authentication and authorization actions of an intelligent client service module resident on a personal computer.

18. The method for an authentication process within a distributed data processing system of Claim 17, the actions of the trusted remote engine manager actions further comprising:

validating identification card information;

validating virtual security officer(s) signatures;

determining if the request being received is from an authenticated user;

based on model definition (policies and rules), determining placement of non-secure data;

keeping participant audits;

notifying other managers or service components for alternative processing such as access control, rules and policies and encryption key agreements; and

auditing all processes.

19.   The method for an authentication process within a distributed data processing system of Claim 17,   the actions of the intelligent client service further comprising:

performing self-registration;

5   performing private signing key and verification;

performing authentications;

performing MAC generation for data integrity;

placing electronic signatures; and

performing data encryption/decryption.

10   20.   The method for an authentication process within a distributed data processing system of Claim 17, the actions of the virtual security officer(s) sub-module further comprising:

validating requests for registration;

generating a type of identification card;

15   signing the identification card; and

sending the identification card to a requesting participant by placing a copy of the identification card in one of the defined modeled locations.